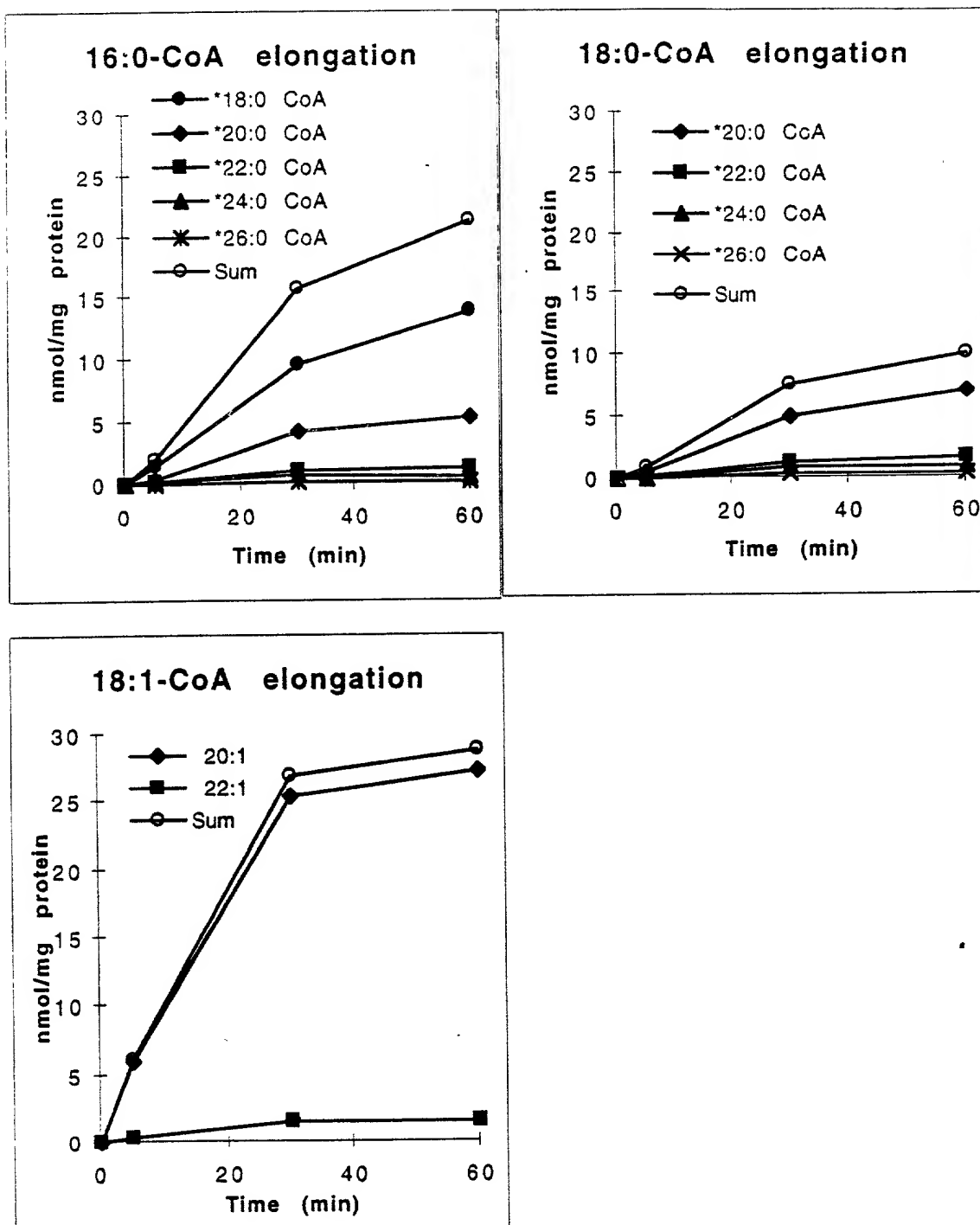
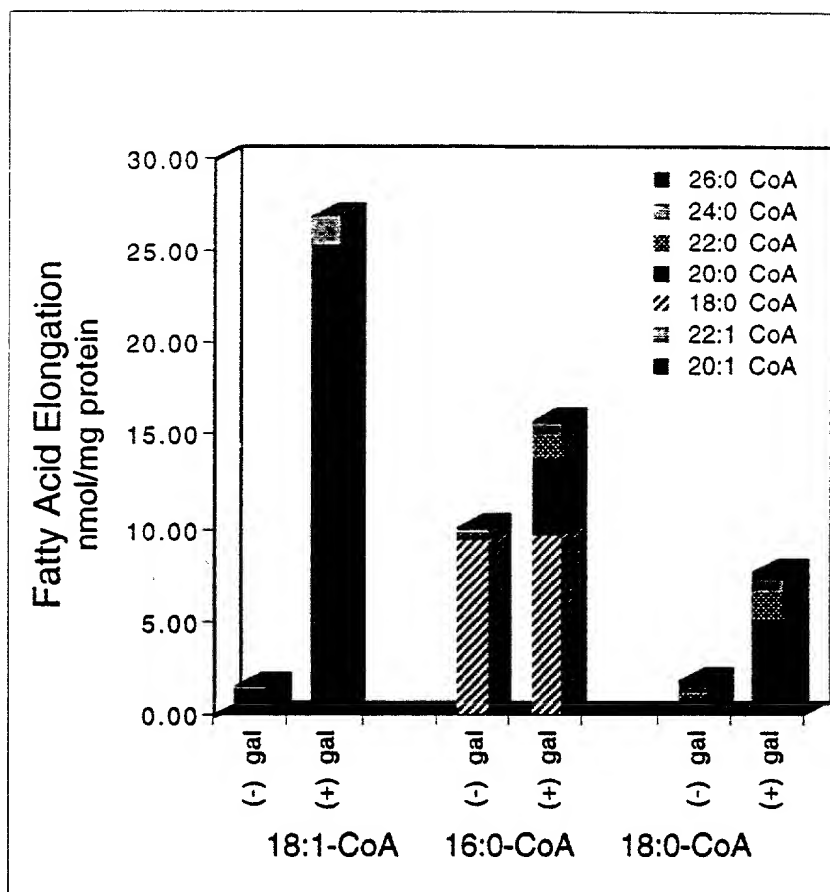


Figure 1

FAE1 w/ respect to time



[illegible]

EL1 1560 bases

ATGGATCGAG	AGAGATTAAC	GGCGGAGATG	GCGTTTCGAG	ATTCATCATC	GGCCGTTATA
AGAATTCGAA	GACGTTTGCC	GGATTTATTA	ACGTCCGTTA	AGCTCAAATA	CGTGAAGCTT
GGACTTCACA	ACTCTTGCAA	CGTGACCACC	ATTCTCTTCT	TCTTAATTAT	TCTTCCTTTA
ACCGGAACCG	TGCTGGTTCA	GCTAACCGGT	CTAACGTTCTG	ATACGTTCTC	TGAGCTTTGG
TCTAACCAGG	CGGTTCAACT	CGACACGGCG	ACGAGACTTA	CCTGCTTGGT	TTTCCTCTCC
TTCGTTTTGA	CCCTCTACGT	GGCTAACCGG	TCTAAACCGG	TTTACCTAGT	GGATTTCTCC
TGCTACAAAC	CGGAAGACGA	GCGTAAAATA	TCAGTAGATT	CGTTCTTGAC	GATGACTGAG
GAAAATGGAT	CATTACCCGA	TGACACGGTT	CAGTTCCAGC	AAAGAATCTC	GAACCGGGCC
GGTTTGGGAG	ACGAGACGTA	TCTGCCACGT	GGCATAACTT	CAACGCCCCC	GAAGCTAAAT
ATGTCAGAGG	CACGTGCCGA	AGCTGAAGCC	GTTATGTTTG	GAGCCTTAGA	TTCCCTCTTC
GAGAAAACCG	GAATTAAACC	GGCCGAAGTC	GGAATCTTGA	TAGTAAACTG	CAGCTTATTC
AATCCGACGC	CGTCTCTATC	AGCGATGATC	GTGAACEATT	ACAAGATGAG	AGAAGACATC
AAAAGTTACA	ACCTCGGAGG	AATGGGTTGC	TCCGCCGGAT	TAATCTCAAT	CGATCTCGCT
AACAATCTCC	TCAAAGCAAA	CCCTAATTCT	TACGCTGTCTG	TGGTAAGCAC	GGAAAACATA
ACCCTAAACT	GGTACTTCGG	AAATGACCGG	TCAATGCTCC	TCTGCAACTG	CATCTTCCGA
ATGGGCGGAG	CTGCGATTCT	CCTCTCTAAC	CGCCGTCAAG	ACCGGAAGAA	GTCAAAGTAC
TCGCTGGTCA	ACGTCTGTCG	AACACATAAA	GGATCAGACG	ACAAGAATA	CAATTGCGTG
TACCAGAAGG	AAGACGAGAG	AGGAACAATC	GGTGTCTCTT	TAGCTAGAGA	GCTCATGTCT
GTCGCCGGAG	ACGCTCTGAA	AACAAACATC	ACGACTTTAG	GACCGATGGT	TCTTCCATTG
TCAGAGCAGT	TGATGTTCTT	GATTTCCCTTG	GTCAAAAGGA	AGATGTTCAA	GTTAAAAGTT
AAACCGTATA	TTCCGGATTT	CAAGCTAGCT	TTCGAGCATT	TCTGTATTCA	CGCAGGAGGT
AGAGCGGTTT	TAGACGAAGT	GCAGAAGAAT	CTTGATCTCA	AAGATTGGCA	CATGGAACCT
TCTAGAATGA	CTTTGCACAG	ATTTGGTAAC	ACTTCGAGTA	GCTCGCTTTG	GTATGAGATG
GCTTATACCG	AAGCTAAGGG	TCGGGTAAAA	GCTGGTGACC	GACTTTGGCA	GATTGCGTTT
GGATCGGGTT	TCAAGTGTA	TAGTGCGGTT	TGGAAAGCGT	TACGACCGGT	TTGACGGAG
GAGATGACCG	GTAATGCTTG	GGCTGGTTCG	ATTGATCAAT	ATCCGGTTAA	AGTTGTGCAA

EL1
FIGURE 3

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EL1 sequence
Molecular Weight 58379.00 Daltons
520 Amino Acids
62 Strongly Basic(+) Amino Acids (K,R)
52 Strongly Acidic(-) Amino Acids (D,E)
187 Hydrophobic Amino Acids (A,I,L,F,W,V)
144 Polar Amino Acids (N,C,Q,S,T,Y)
8.784 Isoelectric Point
10.804 Charge at PH 7.0

MDRERLTAEM	AFRDSSSAVI	RIRRLPDLL	TSVKLKYVKL	GLHNSCNVTT	ILFFLIILPL
TGTVLVQLTG	LTFDTFSELW	SNQAVQLDTA	TRLTCLVFLS	FVLTLYVANR	SKPVYLVDFS
CYKPEDERKI	SVDSFLTMTTE	ENGSTDDTV	QFQQRISNRA	GLGDETYLPR	GITSTPPKLN
MSEARAEAEA	VMFGALDSL	EKTGIKPAEV	GILIVNCSLF	NPTPSLSAMI	VNHYKMREDI
KSYNLGGMGC	SAGLISIDLA	NNLLKANPNS	YAVVVSTENI	TLNWFYGNDR	SMLLCNCIFR
MGGAAILLN	RRQDRKKSKY	SLVNVVRTHK	GSDDKNYNCV	YQKEDERGTI	GVSLARELMS
VAGDALKTNI	TTLGPMVLPL	SEQLMFLISL	VKRKMFKLV	KPYIPDFKLA	FEHFCIHAGG
RAVLDEVQKN	LDLKDWHMEP	SRMTLHRFGN	TSSSSLWYEM	AYTEAKGRVK	AGDRLWQIAF
GSGFKCNSAV	WKALRPVSTE	EMTGNWAGS	IDQYPVKVVQ		

FIGURE 4

EL2 1479 bases

ATGGATTACC	CCATGAAGAA	GGTAAAAATC	TTTTTCAACT	ACCTCATGGC	GCATCGCTTC	
AAGCTCTGCT	TCTTACCATT	AATGGTTGCT	ATAGCCGTGG	AGGCGTCTCG	TCTTTCCACA	120
CAAGATCTCC	AAAACCTTTA	CCTCTACTTA	CAAAAACAACC	ACACATCTCT	AACCATGTTC	
TTCCTTTACC	TCGCTCTCGG	GTCGACTCTT	TACCTCATGA	CCCGGCCCAA	ACCCGTTTTAT	240
CTCGTTGACT	TTAGCTGCTA	CCTCCCACCG	TCGCATCTCA	AAGCCAGCAC	CCAGAGGATC	
ATGCAACACG	TAAGGCTTGT	ACGAGAAGCA	GGCGCGTGGA	AGCAAGAGTC	CGATTACTTG	360
ATGGACTTCT	GCGAGAAGAT	TCTAGAACGT	TCCGGTCTAG	GCCAAGAGAC	GTACGTACCC	
GAAGGTCTTC	AACTTTTGCC	ACTACAACAG	AATTTGGCTG	TATCACGTAT	AGAGACGGAG	480
GAAGTTATTA	TTGGTGCGGT	CGATAATCTG	TTTCGCAACA	CGGGAATAAG	CCCTAGTGAT	
ATAGGTATAT	TGGTGGTGAA	TTCAAGCACT	TTTAATCCAA	CACCTTCGCT	ATCAAGTATC	600
TTAGTGAATA	AGTTTAAACT	TAGGGATAAT	ATAAAGAGCT	TGAATCTTGG	TGGGATGGGG	
TGTAGCGCTG	GAGTCATCGC	TATCGATGCG	GCTAAGAGCT	TGTTACAAGT	TCATAGAAAC	720
ACTTATGCTC	TTGTGGTGAG	CACGGAGAAC	ATCACTCAAA	ACTTGTACAT	GGGTAACAAC	
AAATCAATGT	TGGTTACAAA	CTGTTTGTTT	CGTATAGGTG	GGGCCGCGAT	TTTGCTTTCT	840
AACCGGTCTA	TAGATCGTAA	ACGCGCAAAA	TACGAGCTTG	TTACACACCGT	GCGGGTCCAT	
ACCGGAGCAG	ATGACCGATC	CTATGAATGT	GCAACTCAAG	AAGAGGATGA	AGATGGCATA	960
GTTGGGGTTT	CCTTGTCAAA	GAATCTACCA	ATGGTAGCTG	CAAGAACCCT	AAAGATCAAT	
ATCGCAACTT	TGGGTCCGCT	TGTTCTTCCC	ATAAGCGAGA	AGTTTCACTT	CTTTGTGAGG	1080
TTCGTTAAAA	AGAAGTTTCT	CAACCCCAAG	CTAAAGCATT	ACATTCCGGA	TTTCAAGCTC	
GCATTGAGC	ATTTCTGTAT	CCATGCGGGT	GGTAGAGCGC	TAATTGATGA	GATGGAGAAG	1200
AATCTTCATC	TAACCTCCACT	AGACGTTGAG	GCTTCAAGAA	TGACATTACA	CAGGTTTGGT	
AATACCTCTT	CGAGCTCCAT	TTGGTACGAG	TTGGCTTACA	CAGAAGCCAA	AGGAAGGATG	1320
ACGAAAGGAG	ATAGGATTTG	GCAGATTGCG	TTGGGGTCAG	GTTTTAAGTG	TAATAGTTCA	
GTTTGGGTGG	CTCTTCGTAA	CGTCAAGCCT	TCTACTAATA	ATCCTTGGA	ACAGTGTCTA	1440
CACAAATATC	CAGTTGAGAT	CGATATAGAT	TTAAAAGAG			

EL2
FIGURE 5

[illegible]

FIGURE 6

EL3 1512 bases

CTACGTCAGG GTAGAACAAA GAGTAAACAC TTAAGCAAAA CAATTTGTCC TACTCTTAGG TTATCTCCAA
TGAAGAACTT AAAGATGGTT TTCTTCAAGA TCCTCTTTAT CTCTTTAATG GCAGGATTAG CCATGAAAGG
ATCTAAGATC AACGTAGAAG ATCTCCAAAA GTTCTCCCTC CACCATACAC AGAACAACCT CCAAACCATA
AGCCTTCTAT TGTTTCTTGT CGTTTTTGTG TGGATCCTCT ACATGTTAAC CCGACCTAAA CCCGTTTACC
TTGTTGATTT CTCCTGCTAC CTTCCACCGT CGCATCTCAA GGTCAGTATC CAAACCCTAA TGGGACACGC
AAGACGTGCA AGAGAAGCAG GCATGTGTTG GAAGAACAAA GAGAGCGACC ATTTAGTTGA CTTCCAGGAG
AAGATTCTTG AACGTTCCGG TCTTGGTCAA GAAACCTACA TCCCCGAGGG TCTTCAGTGC TTCCCCTTC
AGCAAGGCAT GGGTGCTTCA CGTAAAGAGA CGGAAGAAGT AATCTTCGGA GCTCTTGACA ATCTTTTTTCG
CAACACCGGT GTAAAACCTG ATGATATCGG TATATTGGTG GTGAATTCTA GCACGTTTAA TCCAACCTCA
TCACTCGCCT CCATGATTGT GAACAAGTAC AAACCTCAGAG ACAACATCAA GAGTTTGAAT CTTGGAGGGA
TGGGTTGCAG TGCCGGAGTT ATAGCTGTTG ATGTCGCTAA GGGATTACTA CAAGTTCATA GGAACACTTA
TGCTATTGTA GTAAGCACAG AGAACATCAC TCAGAACTTA TACTTGGGGA AAAACAAATC AATGCTAGTC
ACAAACTGTT TGTTCCGCGT TGGTGGTGCT GCGGTTCTGC TTTCAAACAG ATCTAGAGAC CGTAACCGCG
CCAAATACGA GCTTGTTTCA ACCGTACGGA TCCATACCGG ATCAGATGAT AGGTCGTTTCG AATGTGCGAC
ACAAGAAGAG GATGAAGATG GTATAATTGG AGTTACCTTG ACAAAGAATC TACCTATGGT GGCTGCAAGG
ACTCTTAAGA TAAATATCGC AACTTTGGGT CCTCTTGTA TCCATTAAA AGAGAAGCTA GCCTTCTTTA
TTACTTTTTGT CAAGAAGAAG TATTTCAAGC CAGAGTTAAG GAATTATACA CCAGATTTC AAGCTTGCCTT
TGAGCATTTT TGTATCCACG CTGGTGGAAG AGCTCTAATA GATGAGCTGG AGAAGAACCT TAAGCTTTCT
CCGTTACACG TAGAGGCGTC AAGAATGACA CTACACAGGT TTGGTAACAC TTCTTCTAGC TCAATCTGGT
ACGAGTTAGC TTATACAGAA GCTAAAGGAA GGATGAAGGA AGGAGATAGG ATTTGGCAGA TTGCTTTGGG
GTCAGGTTTT AAGTGTAACA GTTCAGTATG GGTGGCTCTG CGAGACGTTA AGCCTTCAGC TAACAGTCCA
TGGAAGACT GTATGGATAG ATATCCGGTT GAGATTGATA TT

EL3
FIGURE 7

Downloaded from www.ashg.org

EL3 protein sequence
Molecular Weight 56801.10 Daltons
504 Amino Acids
66 Strongly Basic(+) Amino Acids (K,R)
48 Strongly Acidic(-) Amino Acids (D,E)
183 Hydrophobic Amino Acids (A,I,L,F,W,V)
127 Polar Amino Acids (N,C,Q,S,T,Y)
9.315 Isoelectric Point
19.797 Charge at PH 7.0

LRQGR	TKSKH	LSKTICPTLR	LSPMKNLKMV	FFKILFISLM	AGLAMKGSKI	NVEDLQKFSL	HHTQNNLQTI
SLLLFLVVFV	WILYMLTRPK	PVYLVDVDFSCY	LPPSHLKVSI	QTLMLGHARRA	REAGMCWKNK	ESDHLVDFQE	
KILERSGLGQ	ETYIPEGLQC	FPLQQGMGAS	RKETEEVIFG	ALDNLFRNTG	VKPDDIGILV	VNSSTFNPTP	
SLASMIVNKY	KLRDNIKSLN	LGGMGCSAGV	IAVDVAKGLL	QVHRNTYAIV	VSTENITQNL	YLGKNKSMVL	
TNCLFRVGGG	AVLLSNRSD	RNRKYELVH	TVRIHTGSDD	RSFECATQEE	DEDGIIGVTL	TKNLPMVAAR	
TLKINIATLG	PLVLPLKEKL	AFFITFVKKK	YFKPELRNYT	PDFKLAFEHF	CIHAGGRALI	DELEKNLKLS	
PLHVEASRMT	LHRFGNTSSS	SIWYELAYTE	AKGRMKEGDR	IWQIALGSGF	KCNSSVWVAL	RDVKPSANSP	
WEDCMDRYPV	EIDI						

EL3
FIGURE 8

098837-061301

EL4 cDNA 1650 bases

ATGGGTTAGAT	CCAACGAGCA	AGATCTGCTC	TCTACCGAGA	TCGTTAATCG	TGGGATCGAA	CCATCCGGTC
CTAACGCCGG	CTCACCAACG	TTCTCGGTTA	GGGTCAGGAG	ACGTTTGCCT	GATTTTCTTC	AGTCGGTGAA
CTTGAAGTAC	GTGAAACTTG	GTTACCACTA	CCTCATAAAC	CATGCGGTTT	ATTTGGCGAC	CATACCGGTT
CTTGTGCTGG	TTTTTAGTGC	TGAGGTTGGG	AGTTTAAACA	GAGAAGAGAT	TTGGAAGAAG	CTTTGGGACT
ATGATCTTGC	AACTGTTATC	GGATTCTTCG	GTGTCTTTGT	TTTAACCGCT	TGTGTCTACT	TCATGTCTCG
TCCTCGCTCT	GTTTATCTTA	TTGATTTTCG	TTGTTACAAG	CCCTCCGATG	AACACAAGGT	GACAAAAGAA
GAGTTTCATAG	AACTAGCGAG	AAAATCAGGG	AAGTTCGACG	AAGAGACACT	CGGTTTCAAG	AAGAGGATCT
TACAAGCCTC	AGGCATAGGC	GACGAGACAT	ACGTCCCAAG	ATCCATCTCT	TCATCAGAAA	ACATAACAAC
GATGAAAGAA	GGTCGTGAAG	AAGCCTCTAC	AGTGATCTTT	GGAGCACTAG	ACGAACTCTT	CGAGAAGACA
CGTGTAAGAA	CTAAAGACGT	TGGTGTCTCT	GTGGTTAACT	GTAGCATTTT	CAACCCGACA	CCGTCGTTGT
CCGCAATGGT	GATAAACCAT	TACAAGATGA	GAGGGAACAT	ACTTAGTTAC	AACCTTGGAG	GGATGGGATG
TTGGGCTGGA	ATCATAGCTA	TTGATCTTGC	TCGTGACATG	CTTCAGTCTA	ACCCTAATAG	TTATGCTGTT
GTTGTGAGTA	CTGAGATGGT	TGGGTATAAT	TGGTACGTGG	GAAGTGACAA	GTCAATGGTT	ATACCTAATT
GTTTCTTTAG	GATGGGTTGT	TCTGCCGTTA	TGCTCTCTAA	CCGTCGTCGT	GACTTTTCGCC	ATGCTAAGTA
CCGTCTCGAG	CACATTGTCC	GAACTCATAA	GGCTGCTGAC	GACCGTAGCT	TCAGGAGTGT	GTACCAGGAA
GAAGATGAAC	AAGGATTCAA	GGGGTTGAAG	ATAAGTAGAG	ACTTAATGGA	AGTTGGAGGT	GAAGCTCTCA
AGACAAACAT	CACTACCTTA	GGTCCTCTTG	TCCTACCTTT	CTCCGAGCAG	CTTCTCTTCT	TTGCTGCTTT
GGTCCGCCGA	ACATTCTCAC	CTGCTGCCAA	AACGTCCACA	ACCACTTCCT	TCTCTACTTC	CGCCACCGCA
AAAACCAATG	GAATCAAGTC	TTCCTCTTCC	GATCTGTCCA	AGCCATACAT	CCCGGACTAC	AAGCTCGCCT
TCGAGCATTT	TTGCTTCCAC	GCGGCAAGCA	AAGTAGTGCT	TGAAGAGCTT	CAAAAGAATC	TAGGCTTGAG
TGAAGAGAAT	ATGGAGGCTT	CTAGGATGAC	ACTTCACAGG	TTTGGAACA	CTTCTAGCAG	TGGAATCTGG
TATGAGTTGG	CTTACATGGA	GGCCAAGGAA	AGTGTTTCGTA	GAGGCGATAG	GGTTTGGCAG	ATCGCTTTTCG
GTTCTGGTTT	TAAGTGTAAC	AGTGTGGTGT	GGAAGGCAAT	GAGGAAGGTG	AAGAAGCCAA	CCAGGAACAA
TCCTTGGGTG	GATTGCATCA	ACCGTTACCC	TGTGCCTCTC			

EL4
FIGURE 9

EL4 protein sequence
Molecular Weight 61953.80 Daltons
550 Amino Acids
71 Strongly Basic(+) Amino Acids (K,R)
58 Strongly Acidic(-) Amino Acids (D,E)
191 Hydrophobic Amino Acids (A,I,L,F,W,V)
147 Polar Amino Acids (N,C,Q,S,T,Y)
9.036 Isoelectric Point
14.349 Charge at PH 7.0

MGRSNEQDLL	STEIVNRGIE	PSGPNAGSPT	FSVRVRRRLP	DFLQSVNLKY	VKLGYHYLIN	HAVYLATIPV
LVLVFSAEVG	SLSREBIWKK	LWDYDLATVI	GFFGVFVLTA	CVYFMSRPRS	VYLIDFACYK	PSDEHKVTKE
EFIELARKSG	KFDEETLGFK	KRILQASGIG	DETYVPRIS	SSENITTMKE	GREEASTVIF	GALDELFEKT
RVKPKDVGVL	VVNCISIFNPT	PSLSAMVINH	YKMRGNILSY	NLGGMGCSAG	IIAIDLARDM	LQSNPN SYAV
VVSTEMVGYN	WYVGSDKSMV	IPNCFFRMGC	SAVMLSNRRR	DFRHAKYRLE	HIVRTHKAAD	DRSFRSVYQE
EDEQGFKGLK	ISRDLMEVGG	EALKTNITTL	GPLVLPFSEQ	LLFFAALVRR	TFSPAAKTST	TTSFSTSATA
KTNGIKSSSS	DLSPYIPDY	KLAFEHFCFH	AASKVVLEEL	QKNLGLSEEN	MEASRMTLHR	FGNTSSSGIW
YELAYMEAKE	SVRRGDRVWQ	IAFGSGFKCN	SVVWKAMRKV	KKPTRNNPWV	DCINRYPVPL	

EL4
FIGURE 10

1989-1990

EL5 cDNA 1611 bases

TCGAGCTACG	TCAGGGCTTT	TATATGCACA	AATTCTCATA	AAGTTTTCAA	TTTTATTCCA	TTTTTCTCGG
AAGCCATGGA	AGCTGCTAAT	GAGCCTGTTA	ATGGCGGATC	CGTACAGATC	CGAACAGAGA	ACAACGAAAG
ACGAAAGCTT	CCTAATTCTT	TACAAAGCGT	CAACATGAAA	TACGTCAAGC	TAGGTTATCA	TTACCTCATT
ACTCATCTCT	TCAAGCTCTG	TTTGGTTCCA	TTAATGGCGG	TTTTAGTCAC	AGAGATCTCT	CGATTAACAA
CAGACGATCT	TTACCAGATT	TGGCTTCATC	TCCAATACAA	TCTCGTTGCT	TTCATCTTTC	TCTCTGCTTT
AGCTATCTTT	GGCTCCACCG	TTTACATCAT	GAGTCGTCCC	AGATCTGTTT	ATCTCGTTGA	TTACTCTTGT
TATCTTCCTC	CGGAGAGTCT	TCAGGTTAAG	TATCAGAAGT	TTATGGATCA	TTCTAAGTTG	ATTGAAGATT
TCAATGAGTC	ATCTTTAGAG	TTTCAGAGGA	AGATTCTTGA	ACGTTCTGGT	TTAGGAGAAG	AGACTTATCT
CCCTGAAGCT	TTACATTGTA	TCCCTCCGAG	GCCTACGATG	ATGGCGGCTC	GTGAGGAATC	TGAGCAGGTA
ATGTTTGGTG	CTCTTGATAA	GCTTTTCGAG	AATACCAAGA	TTAACCCTAG	GGATATTGGT	GTGTTGGTTG
TGAATTGTAG	CTTGTTTAAT	CCTACACCTT	CGTTGTCAGC	TATGATTGTT	AACAAGTATA	AGCTTAGAGG
GAATGTTAAG	AGTTTTAACC	TTGGTGGAAT	GGGGTGTAGT	GCTGGTGTTA	TCTCTATCGA	TTTAGCTAAA
GATATGTTGC	AAGTTCATAG	GAATACTTAT	GCTGTTGTGG	TTAGTACTGA	GAACATTACT	CAGAATTGGT
ATTTTGGGAA	TAAGAAGGCT	ATGTTGATTG	CGAATTGTTT	GTTTCGTGTT	GGTGGTTCGG	CGATTTTGTT
GTCGAACAAG	GGGAAAGATC	GTAGACGGTC	TAAGTATAAG	CTTGTTTCATA	CCGTTAGGAC	TCATAAAGGA
GCTGTTGAGA	AGGCTTTCAA	CTGTGTTTAC	CAAGAGCAAG	ATGATAATGG	GAAGACCGGG	GTTTCGTTGT
CGAAAGATCT	TATGGCTATA	GCTGGGGAAG	CTCTTAAGGC	GAATATCACT	ACTTTAGGTC	CTTTGGTTCT
TCCTATAAGT	GAGCAGATTG	TGTTTTTCAT	GACTTTGGTT	ACGAAGAAAC	TGTTTAACTC	GAAGCTGAAG
CCGTATATTC	CGGATTTCAA	GCTTGCGTTT	GATCATTCTT	GTATCCATGC	TGGTGGTAGA	GCTGTGATTG
ATGAGCTTGA	GAAGAATCTG	CAGCTTTCGC	AGACTCATGT	CGAGGCATCC	AGAATGACAC	TGCACAGATT
TGGAACACT	TCTTCGAGCT	CGATTTGGTA	TGAACTGGCT	TACATAGAGG	CTAAAGGTAG	GATGAAGAAA
GGAAACCGGG	TTTGGCAGAT	TGCTTTTGGA	AGTGGGTTTA	AGTGTAACAG	TGCAGTTTGG	GTGGCTCTAA
ACAATGTCAA	GCCTTCGGTT	AGTAGTCCGT	GGGAACACTG	CATCGACCGA	TATCCGGTTA	AGCTCGACTT

C

EL5
FIGURE 11

[illegible]

537 Amino Acids

47 Strongly Acidic(-) Amino Acids (D,E)

148 Polar Amino Acids (N, C, Q, S, T, Y)

9.107 Isoelectric Point

17.930 Charge at PH 7.0

SSYVRAFICT	NSHKVFNFIP	FFSEAMEAAN	EPVNGGSVQI	RTENNERRKL	PNFLQSVNMK	YVKLGHYHLI
THLFLKCLVP	LMAVLVTEIS	RLTTDDLYQI	WLHLQYNLVA	FIFLSALAIF	GSTVYIMSRP	RSVYLV DYSC
YLPPESLQVK	YQKFMDSKSL	IEDFNESLE	FORKILERSG	LGEETYLPEA	LHCIPPRPTM	MAAREESEQV
MFGALDKLFE	NTKINPRDIG	VLVVNCSLFN	PTPSLSAMIV	NKYKLRGNVK	SFNLGGMGCS	AGVISIDLAK
DMLQVHRNTY	AVVVSTENIT	QNWYFGNKKA	MLIPNCLFRV	GGSAILLNSK	GKDRRSKYK	LVHTVTRHKG
AVEKAFNCVY	QEQQDNGKTG	VSLSKDLMAI	AGEALKANIT	TLGLPLVPIS	EKILFFMTLV	TKKLFNSKLL
PYIPDFKLAF	DHFCIHAGGR	AVIDELEKNL	QLSQTHVEAS	RMTLHRFGNT	SSSSIWYELA	YIEAKGRMCK
GNRVWQIAFG	SGFKCNSAVW	VALNNVKPSV	SSPWEHCIDR	YPVKLDF		

EL5
FIGURE 12

EL6

1502 bases

TCTCCGACGATGCCTCAGGCACCGATGCCAGAGTTCTCTAGCTCGGTGAAGCTCAAGTACGTGAAACTTGGTTACCAA
TATTTGGTTAACCATTTCTTGAGTTTTCTTTTGATCCCGATCATGGCTATTGTGCGCCGTTGAGCTTCTTCGGATGGGT
CCTGAAGAGATCCTTAATGTTTGAATTCACTCCAGTTTGACCTAGTTTCAAGTTTCTATGTTCTTCCTTCTTTGTGATC
TTCATCTCCACTGTTTACTTCATGTCCAAGCCACGCACCATCTACCTCGTTGACTATTCTTGTACAAAGCCACCTGTC
ACGTGTCGTGTCCCTTCGCAACTTTTCATGGAACACTCTCGTTTGATCCTCAAGGACAAGCCTAAGAGCGTCGAGTTC
CAAATGAGAATCCTTGAACGTTCTGGCCTCGGTGAGGAGACTTGTCTCCCTCCGGCTATTTCATTATATTCTCCACACA
CCAACCATGGACGCGGCTAGAAGCGAGGCTCAGATGGTTATCTTCGAGGCCATGGACGATCTTTTCAAGAAAACCGGT
CTTAAACCTAAAGACGTCGACATCCTTATCGTCAACTGCTCTCTTTTCTCTCCACACCATCGCTCTCAGCTATGGTC
ATCAACAAATATAAGCTTAGGAGTAATATCAAGAGCTTCAATCTTTCCGGGATGGGCTGCAGCGCGGGCCTGATCTCA
GTTGATCTAGCCCGCGACTTGCTCCAAGTTCATCCCAATTCAAATGCAATCATCGTCAGCACGGAGATCATAACGCCT
AATTACTATCAAGGCAACGAGAGAGCCATGTTGTTACCCAATTGTCTCTTCCGCATGGGTGCGGCAGCCATACACATG
TCAAACCGCCGGTCTGACCGGTGGCGAGCCAAATACAAGCTTTCCCACTCGTCCGGACACACCGTGGCGCTGACGAC
AAGTCTTTTCTACTGTGTCTACGAACAGGAAGACAAAGAAGGACACGTTGGCATCAACTTGTCCAAAGATCTCATGGCC
ATCGCCGGTGAAGCCCTCAAGGCAAACATCACCACAATAGGTCCTTTGGTCCTACCGGCGTCAGAACAACCTTCTCTTC
CTCACGTCCCTAATCGGACGTAAAATCTTCAACCCGAAATGGAAACCATACATACCGGATTTCAAGCTGGCCTTCGAA
CACTTTTGCATTACGCGAGGAGGCAGAGCGGTGATCGACGAGCTCCAAAAGAATCTACAACATCAGGAGAACACGTT
GAGGCCTCAAGAATGACACTACATCGTTTTGGTAAACACGTCACTTCATCGTTATGGTACGAGCTTAGCTACATCGAG
TCTAAAGGGAGAATGAGGAGAGGCGATCGCGTTTGGCAAATCGCGTTTGGGAGTGGTTTCAAGTGTAACCTCTGCCGTG
TGGAAGTGTAACCGTACGATTAAGACACCTAAGGACGGACCATGGTCCGATTGTATCGACCGTTACCCTGTCTTTATT
CCCGAAGTTGTCAAACCTTA

EL6
FIGURE 13

EL6 protein sequence
Molecular Weight 56687.90 Daltons
500 Amino Acids
59 Strongly Basic(+) Amino Acids (K,R)
46 Strongly Acidic(-) Amino Acids (D,E)
182 Hydrophobic Amino Acids (A,I,L,F,W,V)
127 Polar Amino Acids (N,C,Q,S,T,Y)
8.909 Isoelectric Point
14.567 Charge at PH 7.0

SPTMPOAPMP EFSSSVKLKY VKLGYQYLVN HFLSFLLIPI MAIVAVELLR MGPEEILNVW NSLQFDLVQV
LCSSFFVIFI STVYFMSKPR TIYLVYDYSY KPPVTCRVPF ATFMEHSRLI LKDKPKSVEF QMRILERSGL
GEETCLPPAI HYIPPTPTMD AARSEAQMVI FEAMDDLFFK TGLKPKDVDI LIVNCSLFSP TPSLSAMVIN
KYKLRSNIKS FNLSGMGCSA GLISVDLARD LLQVHPNSNA IIVSTEIITP NYYQGNERAM LLPNCLFRMG
AAAIHMSNRR SDRWRKYKL SHLVRTHRGA DDKSFYCVYE QEDKEGHVGI NLSKDLMAIA GEALKANITT
IGPLVLPASE QLLFLTSLIG RKIFNPKWKP YIPDFKLAFE HFCIHAGGRA VIDELQKNLQ LSGEHVEASR
MTLHRFGNTS SSSLWYELSY IESKGRMRRG DRVWQIAFGS GFKCNSAVWK CNRTIKTPKD GPWSDCIDRY
PVFIPEVVKL

EL6
FIGURE 14

1983-03-01

1548 bases

EL7
FIGURE 15

[illegible]

EL7 protein sequence

Molecular Weight 57848.80 Daltons

516 Amino Acids

59 Strongly Basic(+) Amino Acids (K,R)

48 Strongly Acidic(-) Amino Acids (D,E)

189 Hydrophobic Amino Acids (A,I,L,F,W,V)

131 Polar Amino Acids (N,C,Q,S,T,Y)

8.872 Isoelectric Point

12.792 Charge at PH 7.0

MDGAGESRLG GDGGGDGSVG VOIROTRMLP DFLQSVNLKY VKLGYHYLIS NLLTLCLEPL AVVISVEASQ
MNPDDLKQLW IHLQYNLVSIIICSAILVFG LTVYVMTRPR PVYLVDVDFSCY LPPDHLKAPY ARFMEHSRLT
GDFDDSALEF QRKILERSGL GEDTYVPEAM HYVPPRISMA AAREEAEQVM FGALDNLFAN TNVKPKDIGI
LVVNCSLFNP TPSLSAMIVN KYKLRGNIRS YNLGGMGCSA GVIAVDLAKD MLLVHRNTYA VVVSTENITQ
NWFYGNKKSM LIPNCLFRVG GSAVLLSNKS RDKRRSKYRL VHVVRTHRGA DDKAFRCVYQ EQDDTGRTGV
SLSKDLMAIA GETLKTNITT LGPLVLPISQILFFMTLVV KKLFGNGKVKP YIPDFKLAFE HFCIHAGGRA
VIDELEKNLQ LSPVHVEASR MTLHRFGNTS SSSIWYELAY IEAKGRMRRG NRWVQIAFGS GFKCNSAIWE
ALRHVKPSNN SPWEDCIDKY PVTLSY

EL7

FIGURE 16